CLAIMS

1. A method for measuring or trimming, respectively, the impedance of driver devices provided in a semiconductor device, wherein a device including each a pull-up circuit and a pull-down circuit is used, the method comprising:

joint activating both the pull-up circuit and the pull-down circuit; and determining a first current flowing through the pull-up circuit or the pull-down circuit, respectively, with jointly activated pull-up and pull down circuits.

2. The method according to claim 1, wherein the pull-up or pull-down circuits, respectively, are connected to a supply voltage pad or a ground connection, respectively, of the semiconductor device, and the method further comprising:

joint de-activating both the pull-up circuit and the pull-down circuit; and determining a standby current flowing between the supply voltage pad and the ground connection with jointly de-activated pull-up and pull down circuits.

3. The method according to claim 2, wherein the pull-up or pull-down circuits, respectively, are connected to a voltage supply pad or a ground connection, respectively, of the semiconductor device, and the method further comprising:

joint activating both the pull-up circuit and the pull-down circuit; and determining a total current flowing between the supply voltage pad and the ground connection with jointly activated pull-up and pull-down circuits.

- 4. The method according to claim 3, further comprising determining the first current by deducting the standby current from the total current.
- 5. The method according to claim 1, further comprising:
 determining a voltage dropping over the pull-up and/or pull-down circuit, in particular with jointly activated pull-up and pull-down circuits.

- The method according to claim 1, further comprising:
 determining a voltage dropping over the jointly activated pull-up and pull-down circuits.
- 7. The method according to claim 1, wherein one or several of the method steps are performed several times in sequence, each with different settings of transistors contained in the pull-up or pull-down circuits, respectively.
 - 8. The method according to claim 1, the method comprising: determining a total impedance of the pull-up and pull-down circuits.
- 9. The method according to claim 1, wherein, on the basis of a total impedance determined or the first current determined, respectively, and a voltage dropping over the pull-up and/or pull-down circuit as determined, that setting is selected that is to be used during regular operation of the device.
- 10. The method according to claim 1, wherein the device is a driver device used for the driving of output signals during the regular operation of the semiconductor device.
- 11. The method according to claim 1, wherein the device is a test device not used for the driving of output signals during the regular operation of the semiconductor device.
- 12. The method according to claim 11, wherein the test device is connected with a device provided on the semiconductor device itself, by means of which a voltage dropping over the pull-up and/or pull-down circuit is determined.

13. A semiconductor device testing apparatus for performing a method for measuring and trimming the impedance of driver devices provided in a semiconductor device, wherein the semiconductor device uses a pull-up circuit and a pull-down circuit, the apparatus comprising:

means for joint activating of both the pull-up circuit and the pull-down circuit in the semiconductor device; and

means for determining a first current flowing through the pull-up circuit or the pull-down circuit, respectively, with jointly activated pull-up and pull-down circuits.

- 14. The semiconductor device testing apparatus according to claim 13, wherein the pull-up circuit and the pull-down circuit are activated by the testing apparatus by a test mode circuit provided on the semiconductor device being triggered such that it causes an activation of the pull-up circuit and the pull-down circuit.
 - 15. A semiconductor device testing system comprising:

a testing apparatus including:

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means for joint activating of both the pull-up circuit and the pull-down circuit in the semiconductor device;

means for determining a first current flowing through the pull-up circuit or the pull-down circuit, respectively, with jointly activated pull-up and pull-down circuits; and

at least one semiconductor device to be tested by the testing apparatus.

16. A semiconductor device comprising:

a test mode circuit that, after receiving a corresponding trigger signal from a semiconductor device testing apparatus, causes a joint activation of both a pull-up circuit and a pull-down circuit of a device, wherein the semiconductor device testing apparatus includes:

means for joint activating of both the pull-up circuit and the pull-down circuit in the semiconductor device; and

means for determining a first current flowing through the pull-up circuit or the pull-down circuit, respectively, with jointly activated pull-up and pull-down circuits.